1	C	2
NPG IN H	A	+5V
NPG OUT H	B	
BUS PA L	C	0V
	D	BUS D15 L
	E	BUS D14 L
ADJ PAR	F	BUS D13 L
BUS D11 H	H	BUS D12 L
	J	BUS D11 L
	K	BUS D10 L
	L	BUS D09 L
	M	BUS D07 L
BUS DCLO L	N	BUS D06 L
	P	BUS D05 L
	R	BUS D01 L
BUS PB L	S	BUS D00 L
0V	T	BUS D03 L
	U	BUS D02 L
BUS ACLO L	V	BUS D04 L

1	D	2
	A	+5V
	B	
	C	0V
	D	
	E	
	F	BUS BR5 L
	H	
	J	
	K	BUS BG IN H
BUS INIT L	L	BUS BG OUT H
	M	BUS NG IN H
	N	BUS BG NOUT H
	P	BUS BG IN H
	R	BUS BG OUT H
	S	BUS BG4 IN H
0V	T	BUS BG4 OUT H
	U	
	V	

1	E	2
	A	+5V
	B	
BUS A12 L	C	0V
BUS A11 L	D	BUS A15 L
BUS MSYN L	E	BUS A14 L
BUS A10 L	F	BUS A13 L
BUS A01 L	H	BUS A00 L
BUS SSYN L	J	BUS A02 L
BUS A09 L	K	BUS A17 L
BUS A08 L	L	
	M	
	N	BUS A06 L
BUS A16 L	P	BUS A07 L
BUS A05 L	R	
	S	
0V	T	
BUS A06 L	U	BUS A04 L
BUS A05 L	V	BUS A03 L

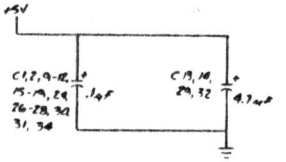
1	F	2
	A	+5V
	B	
	C	0V
BUS BUSY L	D	
	E	
	F	
	H	
BUS NPR L	J	
	K	
	L	
BUS INTR L	M	
	N	
	P	
	R	
	S	
0V	T	BUS SACK L
	U	
	V	

J1	
1	0V
2	FBY L
3	0V
4	LWD L
5	0V
6	WD4 L
7	0V
8	GO L
9	0V
10	WD0 L
11	0V
12	WD1 L
13	0V
14	SPARE
15	0V
16	LOL L
17	0V
18	REVERSE L
19	0V
20	REWIND L
21	0V
22	WDP L
23	0V
24	WD7 L
25	0V
26	WD5 L
27	0V
28	WD6 L
29	0V
30	WD2 L
31	0V
32	WD3 L
33	0V
34	WRT L
35	0V
36	LGAP/RTM2 L
37	0V
38	EDIT L
39	0V
40	ERASE L
41	0V
42	WTM L
43	0V
44	RTM 1 L
45	0V
46	TAO L
47	0V
48	RD2 L
49	0V
50	RD3 L

J2	
1	RDP L
2	RD0 L
3	RD1 L
4	BOT L
5	0V
6	RD4 L
7	0V
8	RD7 L
9	0V
10	RD6 L
11	0V
12	HER L
13	0V
14	FMR L
15	0V
16	PRD L
17	0V
18	FEN L
19	0V
20	RD5 L
21	0V
22	EOT L
23	0V
24	UNL L
25	0V
26	INRB L
27	0V
28	READY L
29	0V
30	RWD L
31	0V
32	FPT L
33	0V
34	RD5 L
35	0V
36	WD5 L
37	0V
38	DBY L
39	0V
40	HSPS L
41	0V
42	CER L
43	0V
44	ONL L
45	0V
46	TADI L
47	0V
48	FAD L
49	0V
50	HSPD L

J3	
1	0V
2	0V
3	0V
4	SPARE
5	0V
6	EXSTOP H
7	0V
8	EXCLOCK L
9	0V
10	EXRESET L
11	0V
12	SPARE
13	0V
14	0V
15	PA10 H
16	PA09 H
17	PA08 H
18	PA07 H
19	PA06 H
20	PA05 H
21	PA04 H
22	PA03 H
23	PA02 H
24	PA01 H
25	PA00 H
26	0V

J4	
1	0V
2	DB00 H
3	DB01 H
4	DB02 H
5	DB03 H
6	DB04 H
7	DB05 H
8	DB06 H
9	DB07 H
10	0V
11	
12	
13	
14	
15	
16	
17	0V
18	EXTEST H
19	0V
20	SPARE



REF DES.	GATES USED/PER TOTAL	PART NO.
U7	2/4	7438
U16	3/6	74S10
U27	3/4	74S32
U30	5/6	74LS04
U31	2/4	74LS08
U32	5/6	74S04
U39	3/6	7404
U37	3/4	74LS00
U38	1/4	74S32
U47	2/4	7408
U50	1/4	74LS07
U55	1/2	74S139
U72	2/4	74S132
U98	3/4	74LS00
U96	2/13	74LS40
U92	3/4	74S00
U105	3/4	7438

LAST REFERANCE DESIGNATION USED	
CAPACITOR	C34
DIODE	CR1
INTEGRATED CIRCUIT	U111
RESISTOR	RZ8
RESISTOR MODULE	RM16
SWITCH	SW3

NOTES: UNLESS OTHERWISE SPECIFIED.

1. CAPACITANCE VALUES ARE IN MICROFARADS.
2. RESISTANCE VALUES ARE IN OHMS, ±5%, ¼W

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	A	ECO-0641 INITIAL RELEASE	5-6-82	
	B	ECO-0660 INCORPORATED	6-29-82	JD KOBA
	C	ECO-0727 INCORPORATED	8 AUG 82	JD KOBA
	D	ECO#1151 INCORPORATED	8 MAR 84	EJ LANG
	E	ECO#1189 - INCORPORATED	9 JULY 84	

SHEET 8	CONTROL MEMORY
SHEET 7	BUS DESTINATION DECODERS, BUS SOURCE DECODER, SEQUENCER, MICRO LEVEL INTERRUPT TABLE
SHEET 6	ALO, ALU FLAGS, TEST MUX, INTERRUPT VECTOR SWITCHES, 1854 MUX, OPTION SWITCHES, 2901 SHIFT PATH
SHEET 5	READ DATA REGISTER AND CONTROL, WRITE DATA REGISTER AND CONTROL, TAPE CONTROL REGISTER
SHEET 4	UNIBUS CONTROL
SHEET 3	BUFFER ADDRESS REGISTER, BUFFER, SET UP REGISTER, PARITY GENERATOR
SHEET 2	UNIBUS ADDRESS INTERFACE, TC12 ADDRESS DECODE, UNIBUS DATA INTERFACE

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS DECIMALS ANGLES .XX ± .02 .XXX ± .010

THIS DRAWING CONTAINS INFORMATION PROPRIETARY TO EMULEX INCORPORATED AND MAY NOT BE REPRODUCED OR USED FOR OTHER THAN EMULEX PURPOSES WITHOUT PRIOR WRITTEN PERMISSION FROM AN OFFICER OF THE ABOVE FIRM.

EMULEX CORPORATION
SANTA ANA, CALIF.

TITLE: SCHEMATIC DIAGRAM, TU12 TAPE FORMATTER

MATERIAL

FINISH

DRAWN G PLATT 4-82

CHECKED

ENGINEER

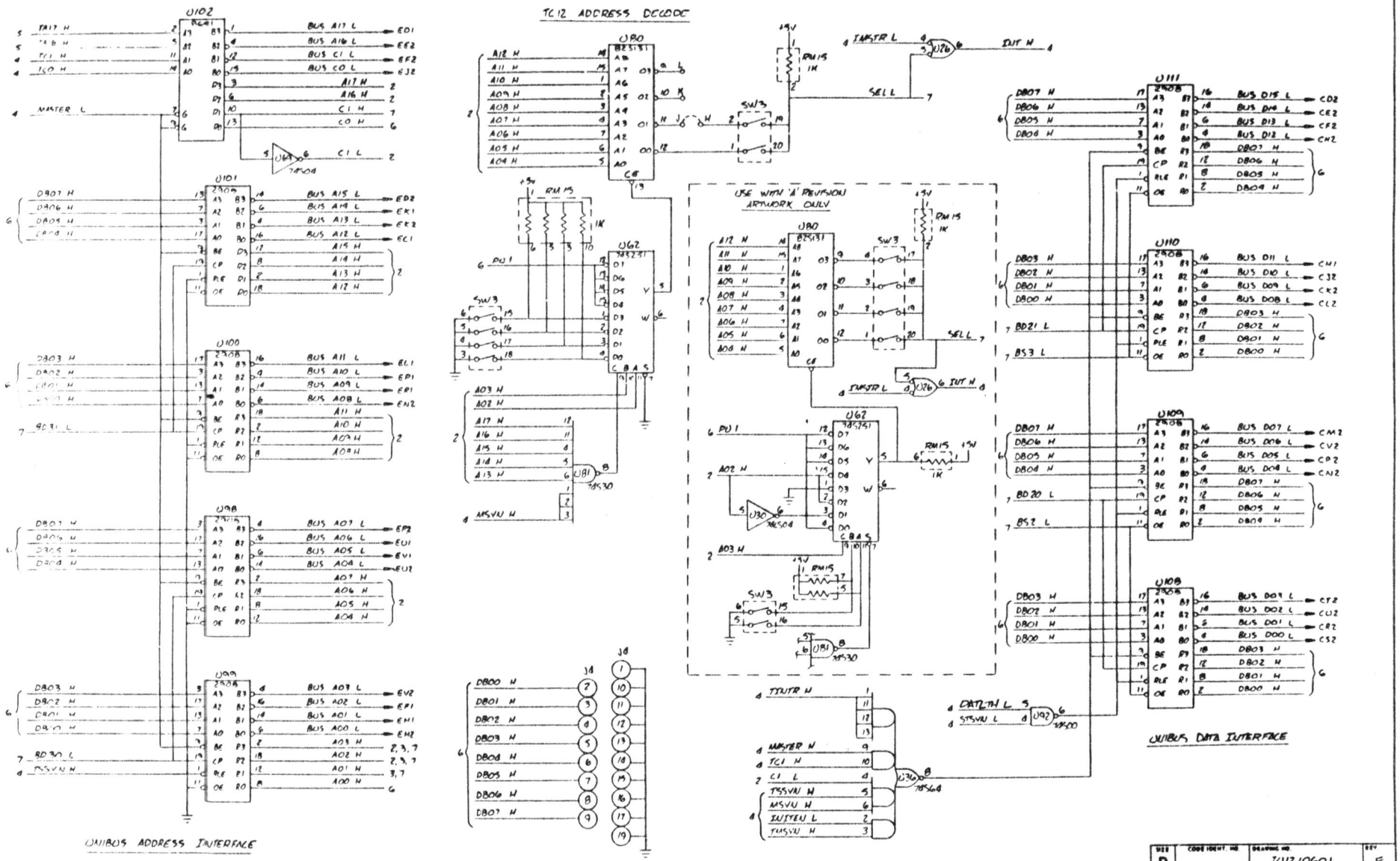
APPROVED

APPROVED

SIZE D | CODE IDENT NO. | DRAWING NO. TC12 10601 | REV. E

SCALE NONE | WORK ORDER NO. | SHEET 1 OF 8

NEXT ASSY | USED ON | APPLICATION | DO NOT SCALE DRAWING



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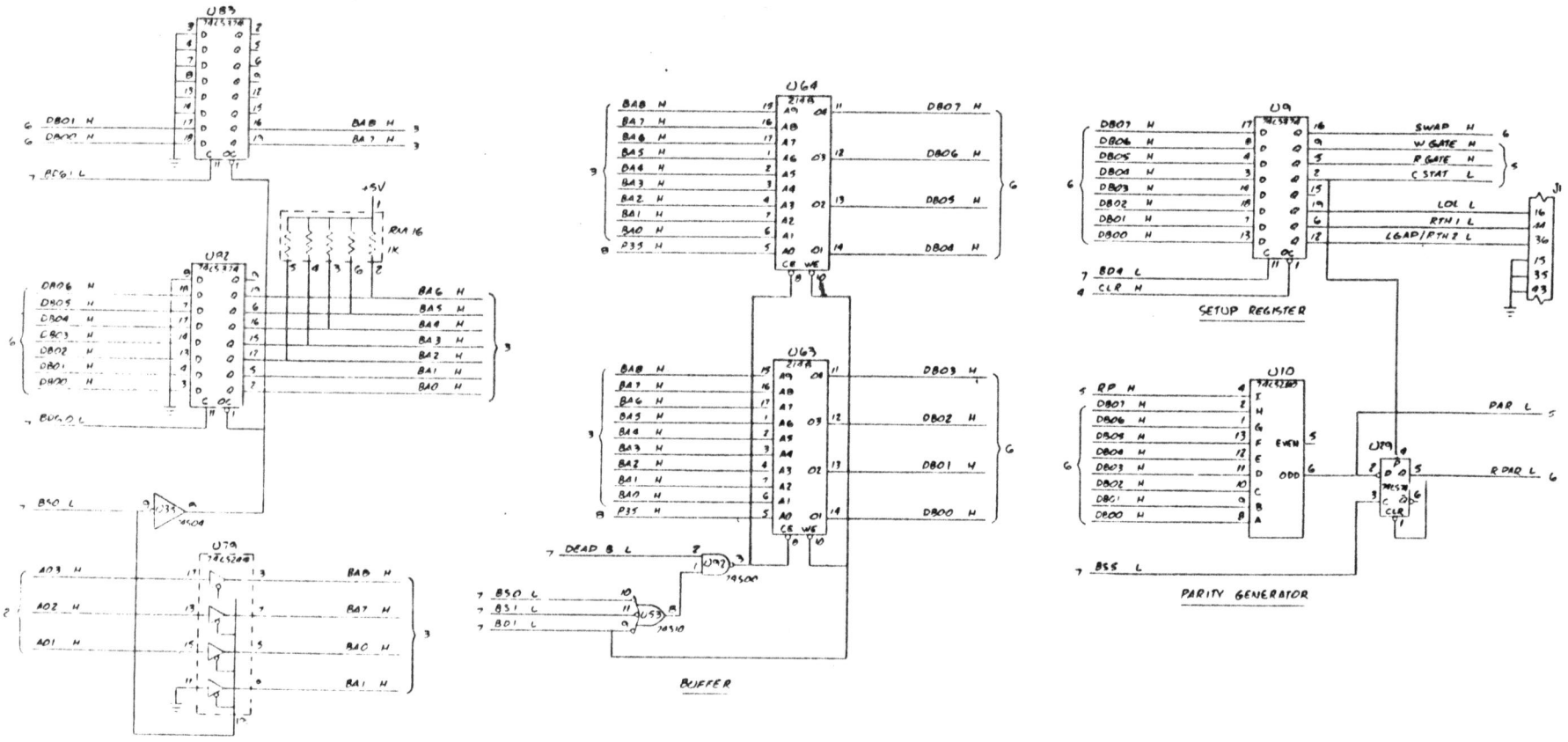
SCALE NONE	WORK ORDER NO	SHEET 2 OF 8	



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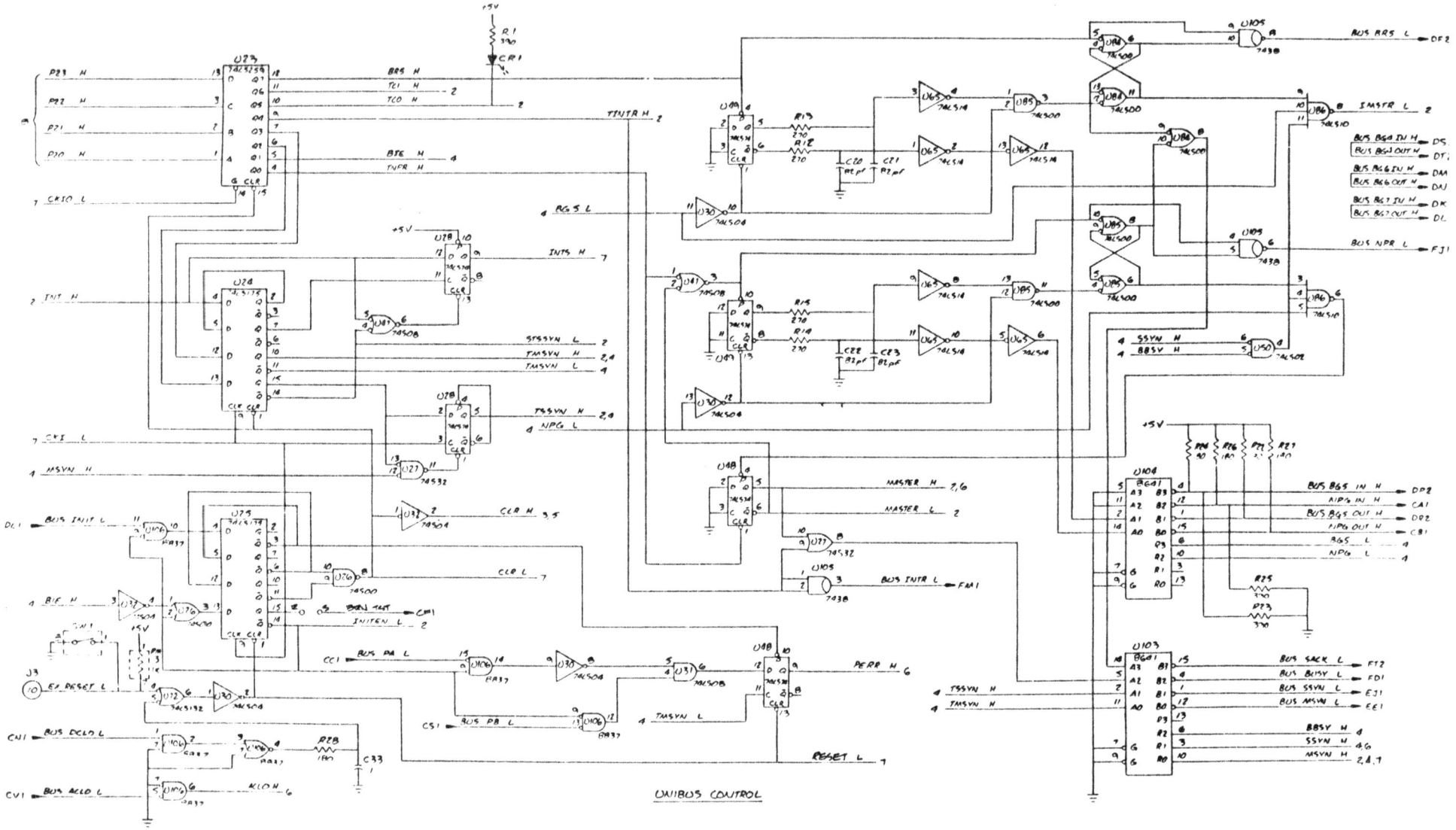
SCALE NONE		SHEET 3 OF 8	



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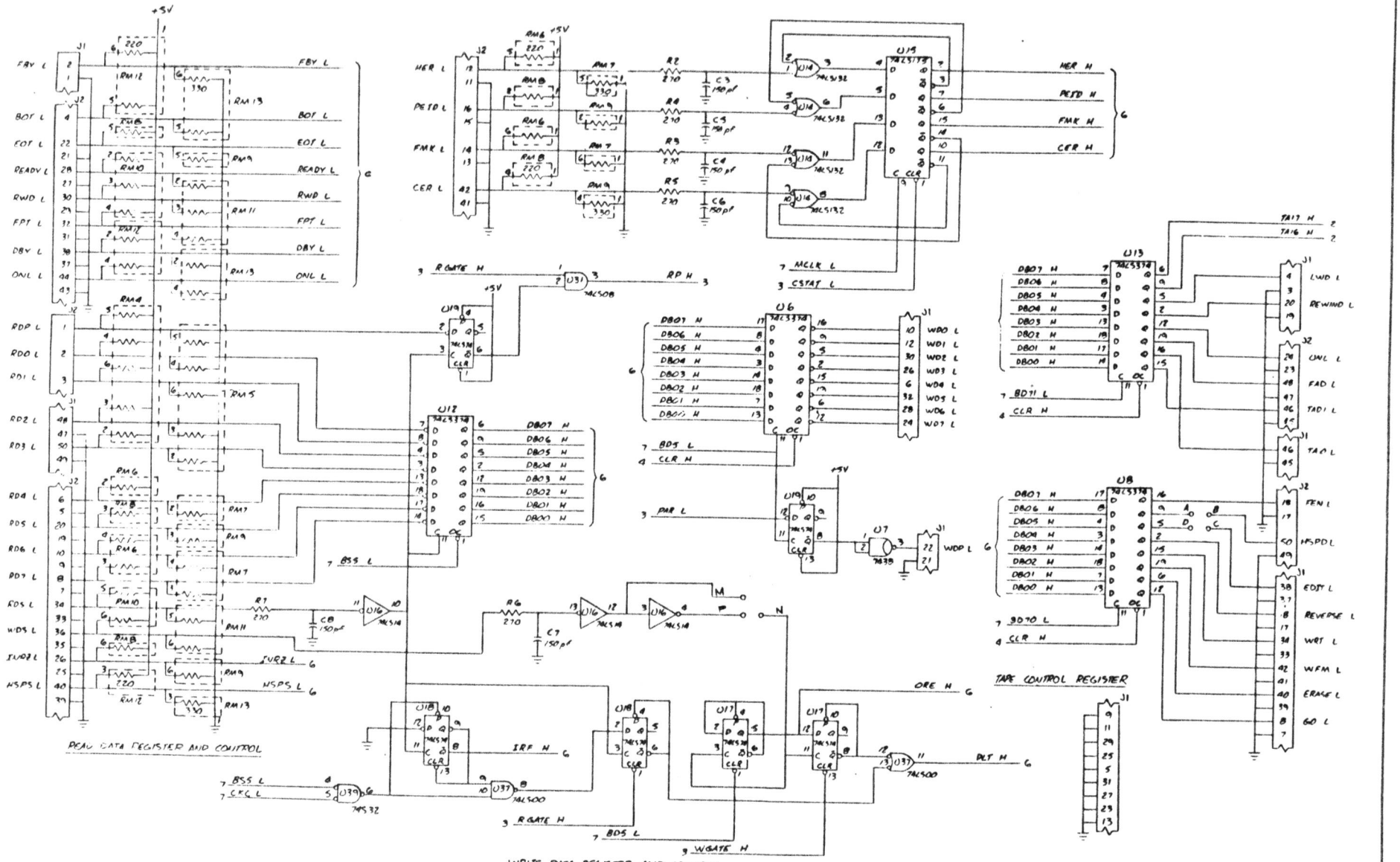

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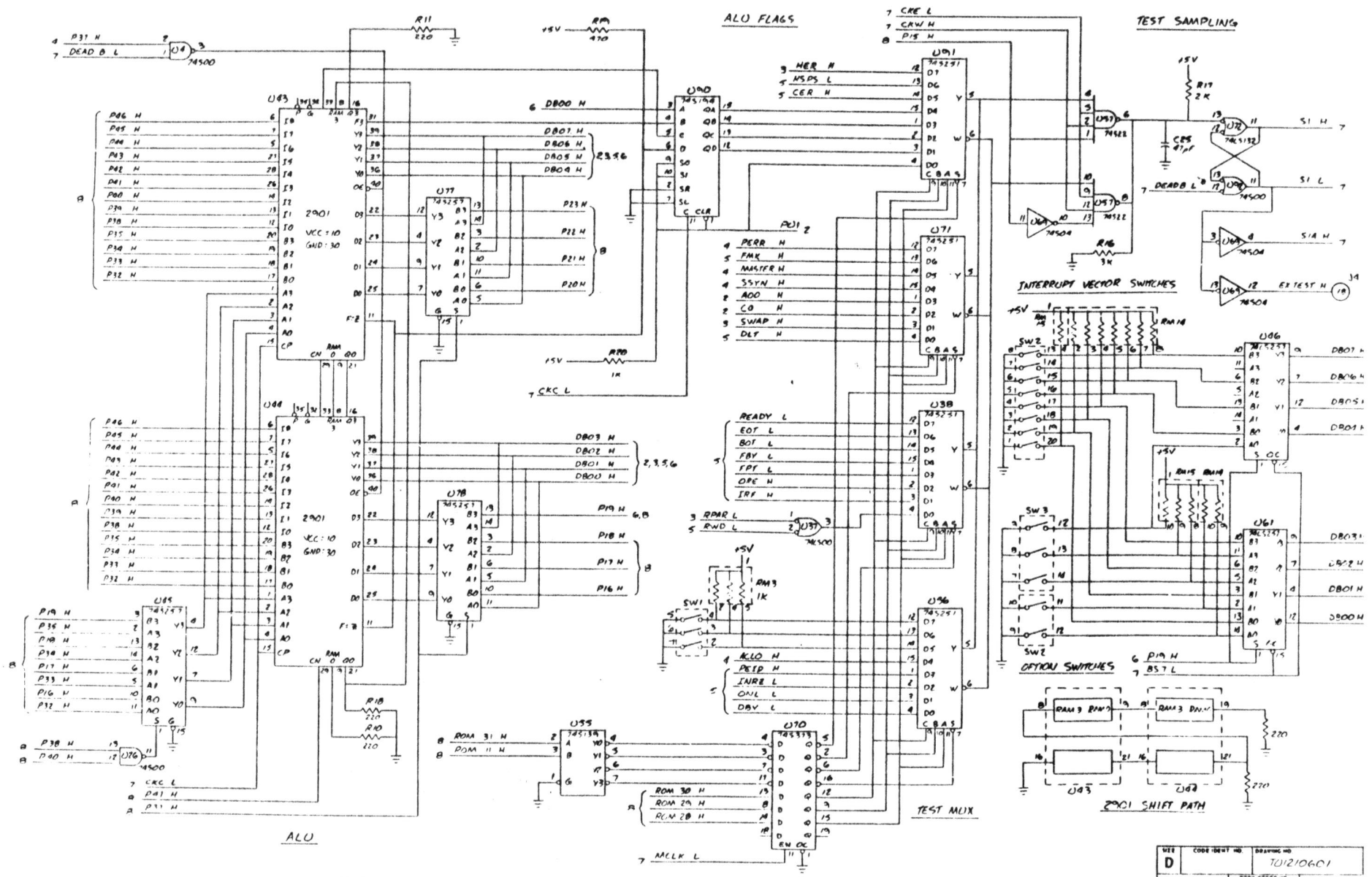
SCALE NONE	WORK ORDER NO	SHEET 5 OF 8	


ALU
ALU FLAGS
TEST SAMPLING
INTERRUPT VECTOR SWITCHES
OPTION SWITCHES
2901 SHIFT PATH
TEST MUX
2901
VCC: 10
GND: 30
RAM 0 00
+5V
DEAD B L
P37 H
DBOO H
DBO1 H
DBO2 H
DBO3 H
DBO4 H
DBO5 H
DBO6 H
DBO7 H
P20 H
P21 H
P22 H
P23 H
P16 H
P17 H
P18 H
P19 H
CRC L
P31 H
P32 H
P33 H
P34 H
P35 H
P36 H
P38 H
P39 H
P40 H
P41 H
P42 H
P43 H
P44 H
P45 H
P46 H
PERR H
FMK H
MASTER H
SSYN H
ADD H
CO H
SWAP H
DLT H
HER H
NSPS L
CER H
CRE L
CRW H
PIS H
READY L
EOT L
BOT L
FBY L
FPT L
OPE H
IRF H
RMR L
RWD L
ACLO H
PERR H
INRE L
ONL L
DBY L
MCLK L
ROM 31 H
ROM 11 H
ROM 30 H
ROM 29 H
ROM 28 H
SI H
SI L
SIA H
EXTEST H
R11 220
R10 220
R18 220
R9 470
R17 2K
R16 3K
R20 1K
RM3 1K
C85 47pf
SW1
SW2
SW3
U83
U84
U85
U86
U87
U88
U89
U90
U91
U92
U93
U94
U95
U96
U97
U98
U99
U100
U101
U102
U103
U104
U105
U106
U107
U108
U109
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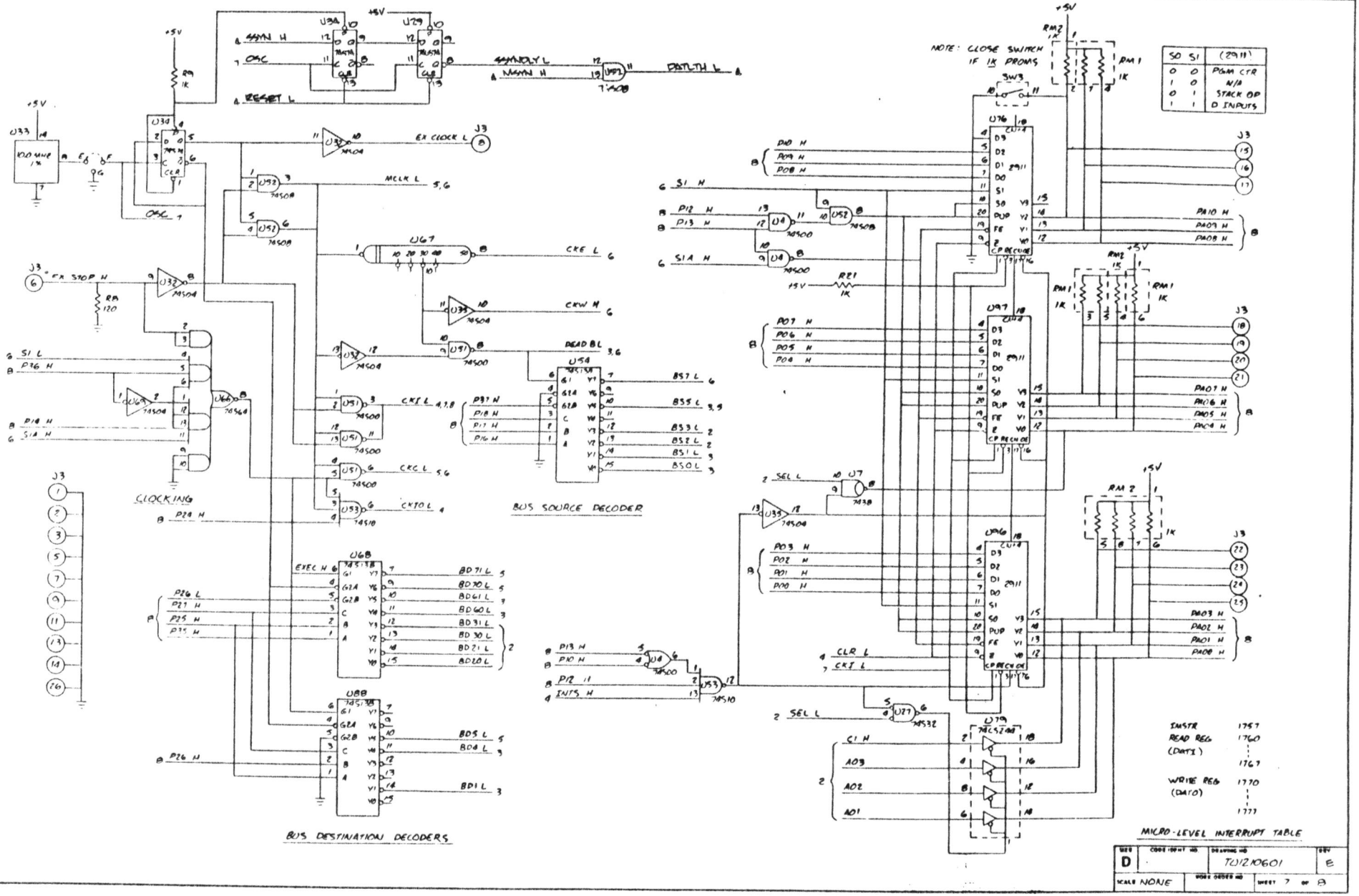
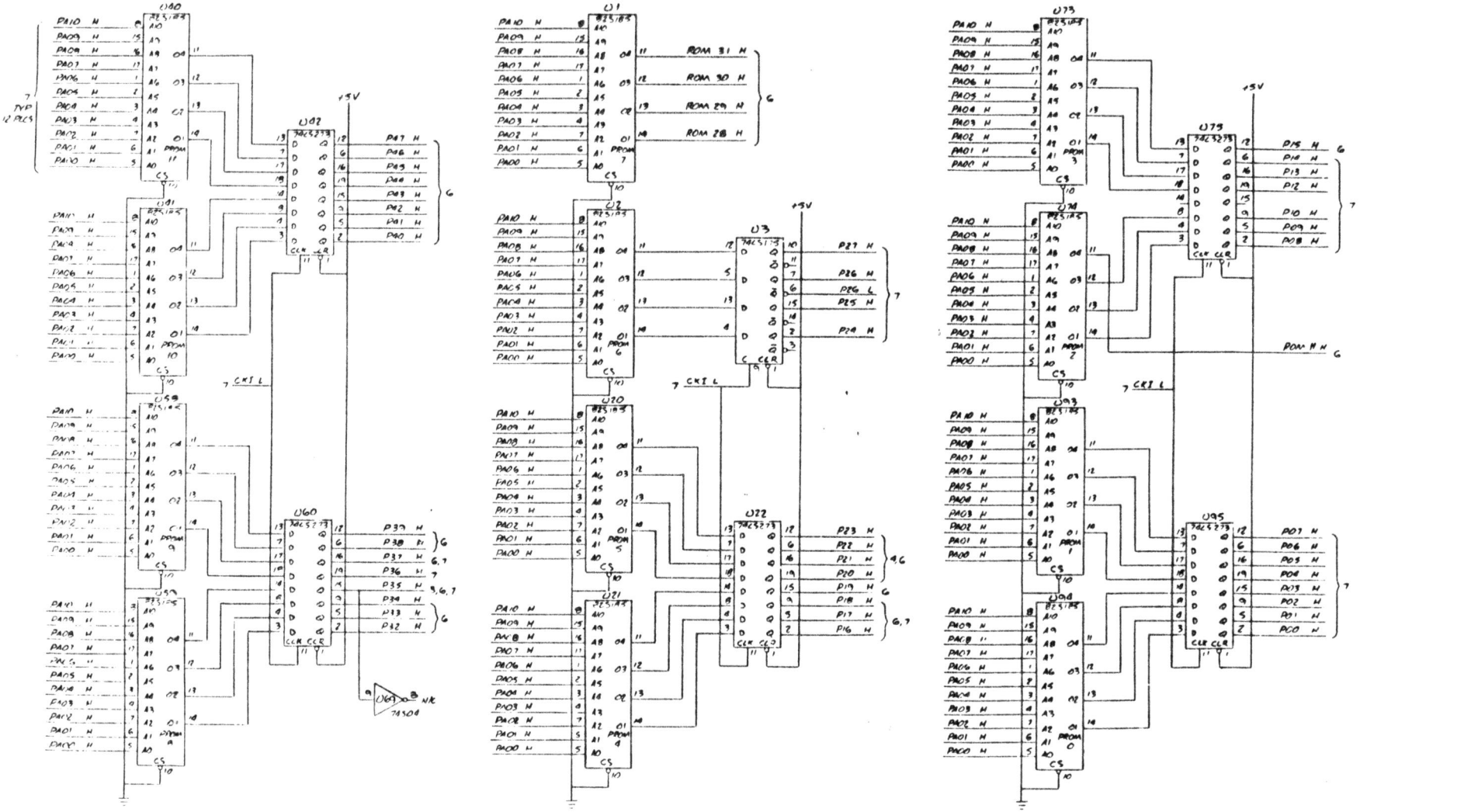
U111
U112
U113
U114
U115
U116
U117
U118
U119
U120
U121
U122


CLOCKING
BUS SOURCE DECODER
BUS DESTINATION DECODERS
MICRO-LEVEL INTERRUPT TABLE
NOTE: CLOSE SWITCH IF 1K PROMS
SO S1 (2911)
0 0 PGM CTR
1 0 N/A
0 1 STACK OP
1 1 D INPUTS
INSTR 1757
READ REG (DATI) 1760
1767
WRITE REG (DATO) 1770
1777
SIZE D
DRAWING NO 7012060 1
REV E
SCALE NONE
SHEET 7 OF 8



SIZE	CODE IDENT NO	DRAWING NO	REV
D		TU12 10601	E
SCALE NONE		WORK ORDER NO	SHEET 8 OF 9